

Serial No.: 10/590,577
Art Unit: 2611

Docket PU040062
Customer No.24498

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Listing and Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A hybrid rake/equalizer receiver for correlating a delay spread in a spread spectrum system, comprising:

a plurality of adaptive equalizers, each for filtering different regions of the delay spread that have an energy level above a pre-specified threshold to respectively provide equalized-descrambled chip sequences for correlation, wherein equalizer coefficients respectively corresponding to the plurality of adaptive equalizers are updated individually; and

a correlation module for correlating the equalized-descrambled chip sequences to a short spreading code to provide correlated outputs, for weighting the correlated outputs to produce weighted-correlated outputs, and for summing the weighted-correlated outputs to produce a bit estimate of an original non-spread bit stream corresponding to the delay spread;

wherein the correlation module weights the correlated outputs according to how much energy is respectively present in the different regions of the delay spread such that the different regions having low energy are given a lower weight than the different regions having high energy.

2. (Canceled)

3. (Canceled)

4. (Currently amended) The hybrid rake/equalizer receiver of claim 2 1, wherein the correlation module performs trivial weighting on the correlated outputs.

5. The hybrid rake/equalizer receiver of claim 1, wherein the spread spectrum system is a Wideband Code Division Multiple Access (WCDMA) system.

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6. (Currently amended) In a spread spectrum receiver, a method for correlating a delay spread, comprising the steps of:

respectively allocating each of a plurality of adaptive equalizers to different regions in the delay spread that exceed a pre-specified threshold energy level to filter the different regions so as to provide equalized-descrambled chip sequences there from; and individually updating equalizer coefficients respectively corresponding to the plurality of adaptive equalizers;

correlating the equalized-descrambled chip sequences to a short spreading code to provide correlated outputs;

assigning weights to the correlated outputs to produce weighted-correlated outputs, said assigning step further assigning the weights to the correlated outputs according to how much energy is present in corresponding portions of the delay spread such that the corresponding portions having low energy are given a lower weight than the corresponding portions having high energy; and

summing the weighted-correlated outputs to produce a bit estimate of an original non-spread bit stream corresponding to the delay spread;

7. (Canceled)

8. (Canceled)

9. (Currently amended) The method of claim 7 6, wherein said assigning step further assigns trivial weights to the correlated outputs.

10. The method of claim 6, wherein the spread spectrum receiver is a Wideband Code Division Multiple Access (WCDMA) receiver.

11. (New) The hybrid rake/equalizer receiver of claim 1, wherein said threshold is specified by a user of the hybrid rake/equalizer receiver prior to operation of the same.

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12. (New) The method of claim 6, wherein said threshold is specified by a user of the hybrid rake/equalizer receiver prior to operation of the same.